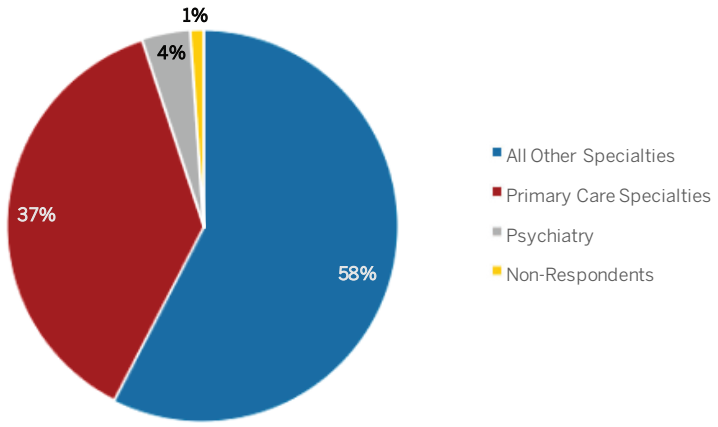
Introduction

It is important to fully understand the characteristics of the physician workforce as they serve as the backbone of the system. Supply data on the physician workforce are routinely collected through surveys administered by the Indiana Professional Licensing Agency (IPLA) in conjunction with biennial license renewals.[1] In 2015, 26,536 physicians renewed their license to practice medicine in the state of Indiana of which only 10,057 physicians reported providing direct patient care. Over one-third (37%) reported primary care as their specialty (figure 1).[2] Primary care physicians (PCP) in other industrialized nations make up approximately 50% of the physician workforce.[3] Comparatively, only 35% of the U.S. physician workforce practices in a primary care specialty.[4]

Figure 1: Physician Specialty Breakdown, 2015



Core Safety Net Providers Who Are They?

Core safety net providers deliver a significant level of healthcare to uninsured, Medicaid, and other vulnerable patients. The "Core Safety Net Providers" exhibit two distinguishing characteristics:

1. Either by legal mandate or explicitly adopted mission, they offer care to patients regardless of their ability to pay for those services; and

2. A substantial share of their patient mix are uninsured, Medicaid, and other vulnerable patients.

Core safety net providers typically include public hospitals, community health centers, and local health departments, as well as special service providers such as AIDS and school-based clinics. In some communities, teaching and community hospitals, private physicians, and ambulatory care sites fill the role of core safety net providers.

Source: Adopted from the Institute of Medicine's report, "America's Health Care Safety Net: Intact but Endangered."

Vulnerable populations frequently struggle with access to services and rely heavily on a robust safety net comprised of PCPs who offer sliding fee scales (payment schedule based on ability to pay) and accept Medicaid or other public health insurance programs. Roughly 50% of Indiana PCPs report not offering a sliding fee scale and 10.3% report not accepting Medicaid.

Table 1: Patient Population, Primary Practice Location

Sliding Fee Scale Patient Population, Primary Practice Location	Primary Care (%)	Psychiatrist (%)	All Physicians (%)
I do not offer a sliding fee scale	49.8	48.8	52.7
Sliding fee patients account for 0% - 50% of my practice	41.0	44.5	34.5
Sliding fee patients account for greater than 50% of my practice	1.5	6.7	1.6
Non-Respondents	7.7	7.4	11.2
Total	***100.0***	***100.0***	***100.0***
Medicaid Patient Population, Primary Practice Location			
I do not accept Indiana Medicaid	10.3	20.1	8.5
Indiana Medicaid account for 0% - 50% of my practice	72.0	51.3	73.8
Indiana Medicaid account for greater than 50% of my practice	13.2	28.7	10.7
Non-Respondents	4.5	4.7	7.0
Total	***100.0***	***100.0***	***100.0***

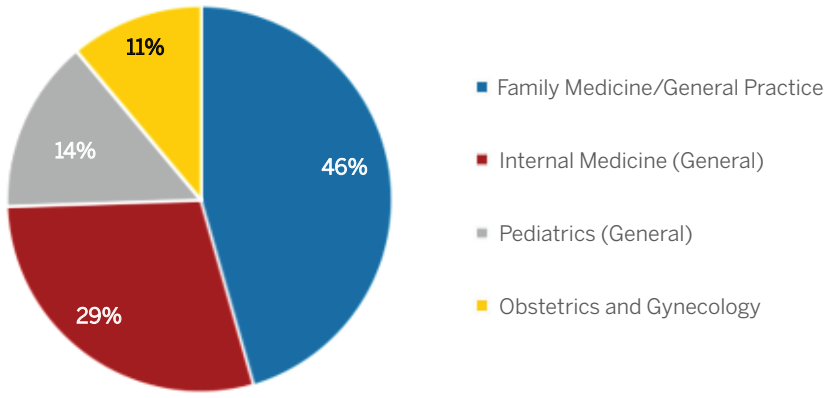
Source: Indiana Physician Re-Licensure Survey, 2015
Notes: Data on sliding fee scale and Medicaid patient populations were not provided by every respondent. Not every respondent had a primary practice address in Indiana, but may have a secondary practice address in Indiana. These practitioners are excluded from this table.

[1] See Data Report: 2016 Physician Licensure Survey for full inclusion/exclusion criteria and survey methodology. http://hdl.handle.net/1805/9653
[2] Primary care specialties, as defined by HRSA, include family medicine, general practice, general internal medicine, general pediatrics, and obstetrics & gynecology.
[3] Starfield B, Shi L, Macinko J. Contribution of Primary Care to Health Systems and Health. Milbank Quarterly. 2005;83(3):457-502.
[4] Bodenheimer T, Chen E, Bennett HD. Confronting the Growing Burden of Chronic Disease: Can the U.S. Health Care Workforce Do theJob? Health Aff (Millwood). 2009;28(1):64-74.

Primary Care Physicians

"Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community."[5] Furthermore, the links between primary access, health outcomes, and costs are well documented, which makes ensuring a strong primary system across the state of Indiana crucial to securing the health of Hoosiers and improving the efficiency of Indiana's health system.[6]

Figure 2: Primary Care Specialty Breakdown, 2015



46%

The number of Indiana PCPs who report family medicine general practice as their principal specialty.

Fewer medical graduates are choosing primary care specialties due in large part due to growing clinical responsibility in conjunction with declining salaries.[7] This trend exemplifies the importance of initiatives to recruit and retain primary care providers. One of the largest predictors of physician recruitment and retention is the location in which they completed their graduate medical education (GME) training. Unfortunately, ***less than 50% of the PCP in Indiana report completing their residency within the state.*** Therefore, policy initiatives have strived to increase capacity for GME while also looking to improve retention of Indiana medical residents.

Table 2: Primary Care Physician Education Information

Education/Training Characteristics	Medical School (%)	Residency (%)
Indiana	39.4	48.8
Contiguous states	19.5	24.9
Other US states	19.0	23.9
Another country	21.3	1.1
Non-Respondents	0.9	1.3
Totals	***100.0***	***100.0***

Source: Indiana Physician Re-Licensure Survey, 2015
Notes: Contiguous states include Illinois, Kentucky, Michigan and Ohio.

[5] Nagykaldi Z, Mold JW, Robinson A, Niebauer L, Ford A. Practice Facilitators and Practice-based Research Networks. J Am Board Fam Med. 2006;19(5):506-10.
[6] Maxey H, Norwood C, Sheff Z, Walters S, Indiana Primary Health Care: Description, Distribution, Challenges, & Strategic Recommendation to Empowered Decision Making. Indiana University Center for Health Policy, 2012.
[7] Bodenheimer T, Berenson RA, Rudolf P. The Primary Care-Specialty Income Gap: Why it Matters. Ann Intern Med. 2007;146(4):301-6.

Primary Care Physicians: Demographics

Indiana's primary care physician workforce is primarily comprised of non-Hispanic (96.1%) and White (74.6%) professionals. A complete breakdown of race/ethnicity as well as other key demographics is provided in table 1.

Table 3: Primary Care Physician Demographic Characteristics

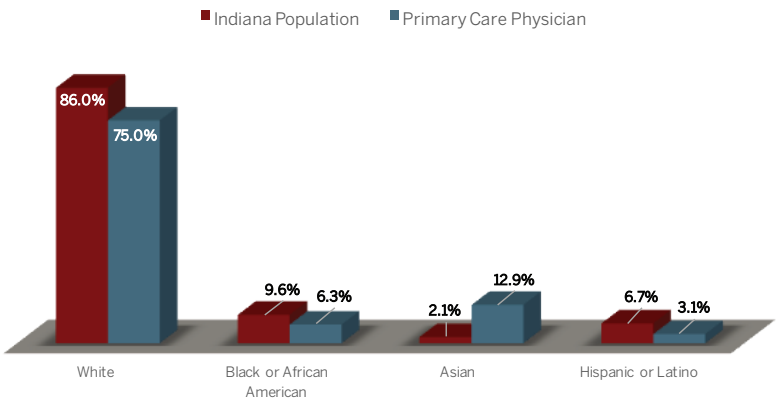
	Female		Male		Non-Respondents		Total	
Mean Age	45.5		52.6		53.0		50.3	
Age Groups	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Under 35	261	17.6	226	10.5	9	6.8	496	13.2
35-44	562	38.0	451	20.9	28	21.1	1,041	27.6
45-54	381	25.8	555	25.7	35	26.3	971	25.8
55-64	226	15.3	577	26.8	43	32.3	846	22.5
Over 65	49	3.3	347	16.1	18	13.5	414	11.0
Non-Respondents	0	0.0	0	0.0	0	0.0	0	0.0
Total	1,479	100.0	2,156	100.0	133	100.0	3,768	100.0
Ethnicity								
Hispanic or Latino	61	1.7	52	1.4	0	3.1	113	3.1
Not Hispanic or Latino	1,408	38.5	2,086	57.6	131	96.1	3,625	96.1
Non-Respondents	10	0.3	18	0.5	2	0.8	30	0.8
Total	1,479	40.4	2,156	59.6	133	100.0	3,768	100.0
Race								
White	1,064	71.9	1,625	75.4	86	64.7	2,775	73.6
Asian	195	13.2	262	12.2	25	18.8	482	12.8
Other	91	6.2	143	6.6	11	8.3	245	6.5
Black	115	7.8	102	4.7	10	7.5	227	6.0
Native Hawaiian/Pacific Islander	0	0.0	3	0.1	0	0.0	3	0.1
American Indian or Alaska Native	4	0.3	4	0.2	0	0.0	8	0.2
Non-Respondents	10	0.7	17	0.8	1	0.8	28	0.7
Total	1,479	100.0	2,156	100.0	133	100.0	3,768	100.0

Source: Indiana Physician Re-Licensure Survey, 2015
Notes: Data on Gender was not provided for every respondent by Indiana Professional Licensing Agency (IPLA). Age was calculated by measuring the difference between the survey date and the respondent's date of birth provided by IPLA.

Figure 3 compares the racial and ethnic characteristics of the primary care physician workforce against the Indiana residential population to identify gaps in workforce diversity.

It is not necessary that providers and patients be of the same demographic for successful healthcare delivery; however, greater levels of diversity are linked to advancing cultural competency, increasing access to high-quality healthcare services, and optimal management of the health system.[8] Strategies for cultivating a more racially and ethnically diverse workforce reflecting the demographics of Indiana's population should be considered and integrated into any health workforce policy discussions.

Figure 3: Difference Between Primary Care Physician Diversity and Indiana Population Diversity, 2015



[8] Cohen JJ, Gabriel BA, Terrell C. The Case for Diversity in the Health Care Workforce. Health Affairs. 2002;21(5):90-102.

Physician Supply and Distribution

Rural communities are frequently faced with insufficient resources to ensure the health, quality of life and economic prosperity for their residents. One important resource commonly scarce in rural communities is the health workforce. Map 1 demonstrates the distribution of the primary care physician workforce in rural Indiana based on physician full-time equivalent (FTE) to population ratio. Darker counties illustrate areas with more Indiana residents per one physician FTE and thus present potential problems for access to care, especially for vulnerable and underserved populations in these regions.

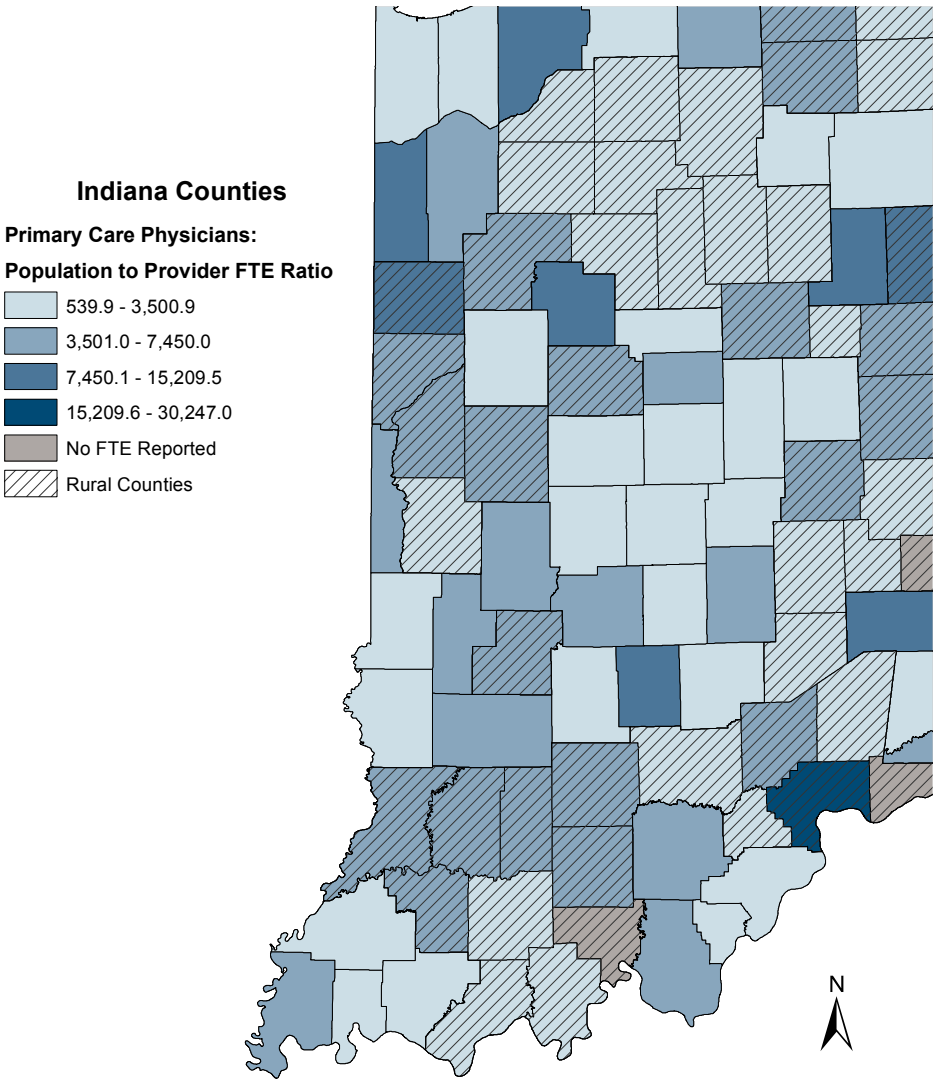
1,331:1

The ratio of Indiana residents per physician in ***rural communities.***

566:1

The ratio of Indiana residents per physician in *urban communities.*

Map 1: Population to Primary Care Physician FTE Ratio



Source: Indiana Physician Re-Licensure Survey, 2015;
US Census Bureau, ACS 5-year population estimates, 2015

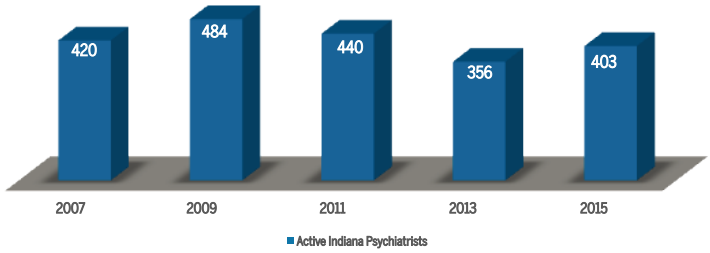
Psychiatrists

Supply

The psychiatric workforce, which serves as a critical component of Indiana's mental health system, is shrinking and aging. Recruiting new physicians into psychiatry will require close examination of pertinent education policy, such as institutional and funding priorities.

Between 2007 and 2015, Indiana has averaged 420 actively practicing psychiatrists. Although the number of practicing psychiatrists in Indiana has declined since 2009, 2015 offered slight increase. Additional supply information on the psychiatric workforce may be found in the 2016 Physician Licensure Survey Data Report. Lack of growth and aging in the psychiatric workforce raises concerns and may have serious implications on mental in Indiana in the next decade.

Figure 4: Active Indiana Psychiatrists



Recruitment and Retention

Not only does Indiana have relatively few psychiatrists practicing in Indiana, but recruitment and retention of psychiatric residents remains low. Location of residency training is a strong predictor of retention post training. In 2015, only 34.1% of physicians practicing in Indiana reported completing their residency in the state.

Table 4: Psychiatry Education Information

Education/Training Characteristics	Medical School (%)	Residency (%)
Indiana	33.3	34.0
Contiguous states	19.4	25.0
Other US states	18.6	39.0
Another Country	28.0	1.0
Non-Respondents	0.7	1.0
Total	***100.0***	***100.0***

Source: Indiana Physician Re-Licensure Survey, 2015
Notes: Contiguous States include Illinois, Kentucky, Michigan, and Ohio.

Psychiatric Workforce Shortages and Distribution

In addition to a relatively small psychiatric workforce, a mal-distribution of practicing psychiatrists throughout Indiana poses an additional threat to access to care for Indiana residents. In 2012, 43 Indiana counties had no practicing psychiatrist.[9] In 2012, approximately 40% of Indiana counties meeting one or more criterion for Mental Health Professional Shortage Area (MHPSA) designation did not currently hold this federal designation. Obtaining a federal designation for a particular geographic region or special population increases access to resources, including federal programs that incentivize health professionals to work in these underserved locations.

Mental Health Professional Shortage Areas

There are approximately 40 Mental Health Professional Shortage Areas (MHPSA) in Indiana. MHPSAs are based on a psychiatrist to population ratio of 1:30,000. In other words, when there are 30,000 or more people per psychiatrist, an area is eligible for MHPSA designation. Applying this formula, it would take approximately 2,800 additional psychiatrists in Indiana to eliminate the current mental health provider shortage.

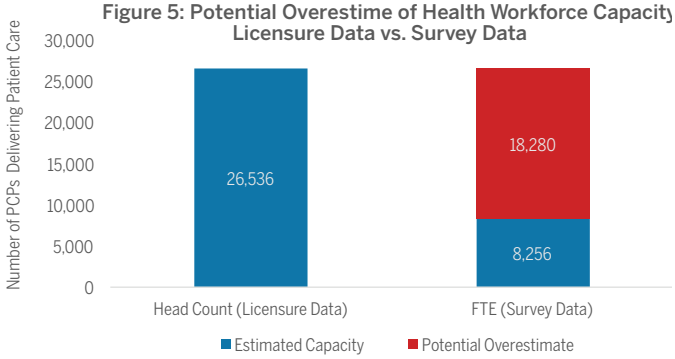
[9] See the "Policy Report: 2012 Indiana Mental Health Workforce" for additional information on mental health professional shortages areas and psychiatric workforce shortages in Indiana. http://hdl.handle.net/1805/5435

Estimating Health Workforce Capacity

Policymakers have struggled with accurately projecting the capacity of the health system to deliver patient care. Yet this data is imperative for evidence-based health policy development aimed to improve access to health. States have looked to partnerships with state licensing agencies to collect potentially rich data on the "size, skill mix, and competencies of today's health workforce relative to anticipated future workforce needs."[10] These data collected through the licensure process provide valuable information which may allow policy makers to better understand the health workforce and develop evidence-based health workforce policies. While the traditional method of "counting heads"of licensed physicians may seem appropriate, this approach may lead to potential overestimates of the workforce capacity to provide health services. As many providers may not work full time in patient care or in health care all together, yet retain a license to practice, a basic head count does not allow for accurate distribution information.

Workforce capacity is more accurately assessed using the reported FTE working in patient care activities. Figure 5 demonstrates how a head count of licensed physicians in Indiana may lead to overestimating the actual reported capacity by approximately 321%. This example highlights the value of gathering high resolution supply information from health professionals on a routine basis in order to supplement licensure data for accurate projections of the supply and capacity of the health system.

Figure 5: Potential Overestime of Health Workforce Capacity Licensure Data vs. Survey Data



[9] See the "Policy Report: 2012 Indiana Mental Health Workforce" for additional information on mental health professional shortages areas and psychiatric workforce shortages in Indiana. http://hdl.handle.net/1805/5435.

[10] Gaul, K., Moore, J., & Fraher, E. (2016). Collaborating With Licensing Bodies in Support of Health Workforce Data Collection: Issues and Strategies. Health Workforce Technical Assistance Center. Rensselaer, NY."

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